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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,405	09/16/2003	Javit A. Drake	08935-299001 / M-5033	3194

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EXAMINER	
HODGE, ROBERT W	

ART UNIT	PAPER NUMBER
1795	

NOTIFICATION DATE	DELIVERY MODE
03/25/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No.	Applicant(s)	
	10/664,405	DRAKE ET AL.	
	Examiner	Art Unit	
	ROBERT HODGE	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *2-7 and 18-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 8-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/26/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks, filed 1/16/09, with respect to the rejection of claim 14 under 35 U.S.C. 112, second paragraph have been fully considered and are persuasive. The rejection of claim 14 under 35 U.S.C. 112, second paragraph has been withdrawn.

Applicant's arguments, see Remarks and Declaration, filed 1/16/09, with respect to the rejection of claims 12, 14, 16 and 17 under 35 U.S.C. 102(e) as being anticipated by U.S. Pre-Grant Publication No 2005/0023236 and the rejection of claims 1 and 8-17 under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Gore have been fully considered and are persuasive. Applicants' declaration has antedated U.S. Pre-Grant Publication No 2005/0023236 and it therefore no longer qualifies as prior art. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 6,506,513.

The remainder of applicant's arguments filed 1/16/09 have been fully considered but they are not persuasive. Applicants state that Gore does not teach a heat producing element disposed in thermal communication with an interior portion of a housing. This is not found persuasive because the heat producing element 208 is clearly located inside of the housing 230 as already shown in the grounds of rejection and because it is a heating element inside a housing it is most certainly in thermal communication with an interior portion of the housing. Regarding the obviousness type double patenting rejections, in determining an obviousness type double patenting rejection if the scope of

the claims of one copending application fully encompasses the scope of the claims of another copending application then an obviousness type double patenting rejection is made, which was already pointed out in the previous office action. Therefore the prior art rejection with Gore and the obviousness type double patenting rejections will be maintained.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pre-Grant Publication No. 2004/0202904 hereinafter Gore.

As seen in figures 2 and 2A-2C, Gore teaches a fuel cartridge 206 having a housing 230, a heat producing element (i.e. wire) 208, disposed in the cartridge and in thermal communication with the cartridge and spacing a vapor portion from a liquid portion (paragraphs [0039]-[0051]).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,506,513 hereinafter Yonetsu in view of Gore.

As seen in the figures, Yonetsu teaches a fuel cartridge, that is prismatic in shape, having a housing 1, a fuel egress port 12, a bladder 16 (figure 7B) that holds a liquid fuel 7 such as methanol (column 5, lines 4-8) that is supplied to a direct methanol fuel cell 2 (column 2, line 34 – column 3, line 19, column 4, line 26 – column 5, line 14 and column 7, line 47 – column 7 line 62).

Yonetsu does not teach a heat producing element.

Gore as discussed above is incorporated herein.

At the time of the invention it would have been obvious to one having ordinary skill in the art to provide a heat-producing element in the fuel cartridge of Yonetsu as taught by Gore in order to vaporize the methanol in the cartridge before entering the direct methanol fuel cell of Yonetsu so that the rate of reaction can be accelerated in the direct methanol fuel cell of Yonetsu thus increasing the overall efficiency of the cartridge and fuel cell system of Yonetsu. If a technique has been used to improve one device (providing a heat-producing element in a fuel cartridge), and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way (vaporizing the methanol in the cartridge before entering the direct methanol fuel cell so that the rate of reaction can be accelerated in the direct methanol fuel cell thus increasing the overall efficiency of the cartridge and fuel cell system), using the technique is obvious unless its actual application is beyond his or her skill. See MPEP 2141 (III) Rationale C, KSR v. Teleflex (Supreme Court 2007).

Claims 12, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonetsu.

Yonetsu as discussed above is incorporated herein. Yonetsu further teaches in figure 7A a piston 30 (i.e. fuel sealing part) urged against the fuel via spring 14 (column 7, lines 48-62).

Yonetsu does not teach the piston and the bladder in the same embodiment.

At the time of the invention it would have been obvious to one having ordinary skill in the art to combine the embodiments of figures 7A and 7B of Yonetsu in order to provide a fuel cartridge with multiple solutions for properly containing the methanol fuel as well as providing sufficient means to push out the fuel through the fuel outlet port thereby providing the necessary fuel to the fuel cell in order for the fuel cell to operate. The above combination such as a piston urged against a bladder, according to known methods by Yonetsu yields the predictable result of providing a sufficient means to push out the fuel through the fuel outlet port thereby providing the necessary fuel to the fuel cell in order for the fuel cell to operate. See MPEP 2141 (III) Rationale A, KSR v. Teleflex (Supreme Court 2007).

Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonetsu as applied to claim 12 above, and further in view of Gore.

Yonetsu does not teach a heat producing element.

Gore as discussed above is incorporated herein. Gore further teaches powering the heat-producing element with a battery (paragraph [0031]).

At the time of the invention it would have been obvious to one having ordinary skill in the art to provide a heat-producing element in the fuel cartridge of Yonetsu as taught by Gore in order to vaporize the methanol in the cartridge before entering the

direct methanol fuel cell of Yonetsu so that the rate of reaction can be accelerated in the direct methanol fuel cell of Yonetsu thus increasing the overall efficiency of the cartridge and fuel cell system of Yonetsu. If a technique has been used to improve one device (providing a heat-producing element in a fuel cartridge), and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way (vaporizing the methanol in the cartridge before entering the direct methanol fuel cell so that the rate of reaction can be accelerated in the direct methanol fuel cell thus increasing the overall efficiency of the cartridge and fuel cell system), using the technique is obvious unless its actual application is beyond his or her skill. See MPEP 2141 (III) Rationale C, KSR v. Teleflex (Supreme Court 2007).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 8, 12 and 17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11 and 12 of copending Application No. 10/664,818. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of copending Application No. 10/664,818 fully encompass the scope of instant claims the only difference is claim 12 provides further structure for the storage of the fuel which has been found in the prior art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 8, 12 and 17 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 and 10 of copending Application No. 10/664,822. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of copending Application No. 10/664,822 fully encompass the scope of the instant claims, the only difference is the instant claims further limit the structure by adding either a heating element or a bladder and piston arrangement.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 11/26/08 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. H./
Examiner, Art Unit 1795

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795